Listing of Claims

Claim 1: (Original) A method for the culture of mammalian cells comprising the steps of:

i) providing a cell culture vessel comprising:

a) mammalian cells;

b) a cell culture support comprising a substrate wherein said substrate comprises a cell culture surface wherein said surface comprises a polymer of an acid monomer and attached thereto, fibroblast feeder cells;

c) cell culture medium sufficient to support the growth of said mammalian cells wherein said medium does not include serum;

ii) providing cell culture medium and conditions which promote the proliferation of said mammalian cells.

Claim 2: (Original) A method according to Claim 1 wherein said mammalian cells are human.

Claim 3: (Original) A method according to Claim 1 wherein said mammalian cells are maintained in culture in an un-differentiated state.

Claim 4: (Original) A method according to Claim 1 wherein said mammalian cells are selected from the group consisting of: epidermal keratinocytes; dermal fibroblasts; adult skin stem cells; embryonic stem cells; melanocytes, corneal fibroblasts, corneal epithelial cells, corneal stem cells; intestinal mucosa fibroblasts, intestinal mucosa keratinocytes, oral mucosa fibroblasts, oral mucosa keratinocytes, urethral fibroblasts and epithelial cells, bladder fibroblasts and epithelial cells, neuronal glial cells and neural cells, hepatocyte stellate cells and epithelial cells.

Claim 5: (Original) A method according to Claim 4 wherein said mammalian cells are autologous keratinocytes.

Claim 6: (Original) A method according to Claim 1 wherein the number of said mammalian cells and said fibroblast cells is at a ratio of about between 1:1-1:5.

Claim 7: (Original) A method according to Claim 6 wherein said ratio is about 5:1.

Claim 8: (Original) A method according to Claim 1 wherein said mammalian cells are seeded at about 0.75×10^4 cells/mm^2.

Claim 9: (Original) A method according to Claim 6 wherein said mammalian cells are keratinocytes.

Claim 10: (Original) A method according to Claim 1 wherein said substrate comprises a non-porous polymer.

Claim 11: (Original) A method according to Claim 1 wherein said substrate is a solid phase substrate.

Claim 12: (Original) A method according to Claim 1 wherein said substrate is a porous material.

Claim 13: (Original) A method according to Claim 12 wherein said material is a woven material.

Claim 14: (Original) A method according to Claim 12 wherein said material is a non-woven material.

Claim 15: (Original) A method according to Claim 1 wherein said cell culture surface comprises a polymer comprising an acid content of at least 2%.

Claim 16: (Original) A method according to Claim 1 wherein said surface comprises a polymer comprising an acid content between about 2-20%.

Claim 17: (Original) A method according to Claim 1 wherein said surface comprises a polymer comprising an acid content greater than 20%.

Claim 18: (Original) A method according to Claim 15 wherein said polymer comprises an acrylic acid monomer with at least 2% acid content.

Claim 19: (Original) A method according to Claim 18 wherein said acid content is between 2% and 10%.

Claim 20: (Original) A method according to Claim 19 wherein said acid content is about 4-5%.

Claim 21: (Original) A method according to Claim 1 wherein said polymer comprises an acid co-polymer.

Claim 22: (Original) A method according to Claim 1 wherein said fibroblast feeder cells are non-proliferative.

Claim 23: (Original) A method according to Claim 22 wherein said fibroblast feeder cells are rendered non-proliferative by lowering the calcium concentration of the growth medium.

Claim 24: (Original) A method according to Claim 1 wherein said fibroblast feeder cells are human fibroblasts.

Claim 25: (Original) A method according to claim 24 wherein said fibroblasts are dermal or oral fibroblasts.

Claim 26: (Original) A method according to Claim 24 wherein said fibroblasts are autologous.

Claim 27: (Original) A cell culture vessel comprising: a cell culture support comprising a substrate wherein said substrate comprises a cell culture surface wherein said surface comprises a polymer of an acid monomer and attached thereto, fibroblast feeder cells.

Claim 28: (Original) A vessel according to Claim 27 wherein said vessel further comprises mammalian cells and cell culture medium which medium does not include serum.

Claim 29: (Original) A vessel according to Claim 28 wherein said mammalian cells are selected from the group consisting of: epidermal keratinocytes; dermal fibroblasts; adult skin stem cells; embryonic stem cells; melanocytes, corneal fibroblasts, corneal epithelial cells, corneal stem cells; intestinal mucosa fibroblasts, intestinal mucosa keratinocytes, oral mucosa fibroblasts, oral mucosa keratinocytes, urethral fibroblasts and epithelial cells, bladder fibroblasts and epithelial cells, neuronal glial cells and neural cells, hepatocyte stellate cells and epithelial cells.

Claim 30: (Original) A vessel according to Claim 29 wherein said mammalian cells are keratinocytes.

Claims 31 – 36: (Canceled)

Claim 37: (Original) A method to culture mammalian cells on a therapeutic vehicle comprising the steps of:

i) providing a preparation comprising:
   a) mammalian cells;
   b) a therapeutic vehicle wherein said vehicle comprises a substrate which comprises a surface wherein said surface comprises a polymer of an acid monomer and attached thereto, fibroblast feeder cells;
   c) cell culture medium sufficient to support the growth of said mammalian cells wherein said medium does not include serum; and

ii) providing cell culture conditions which promote the proliferation of said mammalian cells on said therapeutic vehicle.

Claim 38: (Original) A method according to Claim 37 wherein said mammalian cells are human.

Claim 39: (Original) A method according to Claim 37 wherein said mammalian cells are selected from the group consisting of: epidermal keratinocytes; dermal fibroblasts; adult skin stem cells; embryonic stem cells; melanocytes, corneal fibroblasts, corneal epithelial cells, corneal stem cells; intestinal mucosa fibroblasts, intestinal mucosa keratinocytes, oral mucosa fibroblasts, oral mucosa keratinocytes, urethral fibroblasts and epithelial cells, bladder fibroblasts and epithelial cells, neuronal glial cells and neural cells, hepatocyte stellate cells and epithelial cells.

Claim 40: (Original) A method according to Claim 37 wherein said mammalian cells are autologous.

Claim 41: (Original) A method according to Claim 39 wherein said mammalian cells are keratinocytes.

Claim 42: (Original) A method according to Claim 37 wherein said fibroblast feeder cells are human.

Claim 43: (Original) A method according to Claim 42 wherein said fibroblast feeder cells are dermal fibroblasts or human oral fibroblasts.

Claim 44: (Original) A method according to Claim 42 wherein said feeder cells are autologous.

Claim 45: (Original) A method according to Claim 37 wherein the number of said mammalian cells and said fibroblast cells is at a ratio of about between 1:1-5.1.

Claim 46: (Original) A method according to Claim 45 wherein said ratio is about 5:1.

Claim 47: (Original) A method according to Claim 45 wherein said mammalian cells are keratinocytes and are in a ratio of about 5:1 with said fibroblast cells.

Claim 48: (Original) A method according to Claim 37 wherein said mammalian cells are seeded at about 0.75×10^4 cells/mm^2.

Claim 49: (Original) A method according to Claim 45 wherein said therapeutic vehicle comprises a substrate composed of a polymeric material wherein the ratio of mammalian cells to fibroblast cells is about 5:1.

Claim 50: (Original) A method according to Claim 49 wherein said substrate is composed of a vinyl polymer.

Claim 51: (Original) A method according to Claim 50 wherein said vinyl polymer is selected from the group consisting of: polyvinyl chloride, polyvinyl acetate, polyvinyl alcohol.

Claim 52: (Original) A therapeutic vehicle produced by the method according to Claim 37.

Claim 53: (New) A cell culture vessel according to claim 27, wherein said polymer of an acid monomer is obtainable by plasma polymerization of an acid monomer source.

Claim 54: (New) A cell culture vessel according to claim 53 wherein said acid monomer source comprises 30-99% acid monomer.

Claim 55: (New) A cell culture vessel according to claim 53 wherein said acid monomer source consists of a 100% acid monomer source.

Claim 56: (New) A cell culture vessel according to claim 55 wherein said acid monomer source consists of a 100% acrylic acid.

Claim 57: (New) A cell culture vessel according to claim 53, wherein said polymer is a co-polymer.